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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BRAHAN, THOMAS J

ART UNIT

PAPER NUMBER

3652

DATE MAILED: 07/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
10/048,012

Applicant(s)
SAEKI et al

Examiner
Thomas J. Brahan

Art Unit
3652



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jan 25, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, and 7 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on May 14, 2002 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4,7 6) ☐ Other:

1. The disclosure should be reviewed for translation errors, such as on page 1, at lines 21 and 22, and at lines 34 and 35. See also the rejections below under 35 U.S.C. § 112, second paragraph, which may be due to translation errors. Appropriate correction is required.

2. The following is a quotation of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which applicant regards as his invention.

A claim may be written in independent or, if the nature of the case admits, in dependent or multiple dependent form.

Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the claimed subject matter. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

A claim in multiple dependent form shall contain a reference, in the alternative only, to more than one claim previously set forth and then specify a further limitation of the subject matter claimed. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim. A multiple dependent claim shall be construed to incorporate by reference all the limitations of the particular claim in relation to which it is being considered.

An element in a claim for combination may be expressed as a means or step for performing a specified function without the recital of structure, material or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

3. Claims 1-4, 6, and 7 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For example:

a. In claim 1, lines 2 and 3, the phrase "while taking an object out of a processed- object carrier" is not understood. It appears to be reciting that the system is limited to the taking out of the wafer from its carrier. However the majority of the claimed structure is to a different movement, the lateral movement of the transfer robot by the linear motor.

b. In claim 1, lines 2-4 recite that the object to be transferred is taken out of the a carrier which is provided on the top face of a load port unit. However the load port unit is a side mounted unit, not a top mounted unit. As the load port is usually defined by its port opening, it is confusing to define a

side mounted wafer port as at a top surface. As written the claim appears to possibly be reciting top mounted loading ports as well as side mounted load ports.

c. In claim 1, lines 14 and 15, it is unclear as how the motor is considered as mounted in vertical directions.

d. In claim 4 line 5, it is unclear as to how the term "absorbed" is being used.

4. Claim 7 is rejected under 35 U.S.C. § 112, second and fourth paragraphs, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, and for failing to further limit the invention of the claim from which it depends. The scope of claim 7 is unclear as it appears to rely on the subject matter of claim 1 for patentability, as the claim fails to recite any structural limitations. It also fails to further limit the invention of claim 1 from which it depends, as required by paragraph four of 35 U.S.C. § 112, as it is drawn to a different invention than the transfer system of claim 1.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

7. Claims 1-3 and 7, as best understood, are rejected under 35 U.S.C. § 102(b) as being anticipated by WO 98/19333 (see English equivalent U.S. Patent No. 6,230,721). WO '333 shows a transfer system with a load port (at 4), the transfer system comprising:

- a system body (43);
- a linear motor (45) which is provided to extend in lateral directions of the system body; and
- a processed object transfer robot (41) which is mounted on the linear drive and which is capable of linearly reciprocating in longitudinal directions of the linear drive,

wherein the load port unit (4) is mounted on the outside of the front wall of the system body (43), and the linear drive is mounted inside of the front wall of the system.

8. Claims 1-3 and 7, as best understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Akimoto et al. Akimoto et al shows a transfer system comprising:

- a system body (30);
- a linear drive (at 32) which is provided to extend in lateral directions of the system body; and
- a processed object transfer robot (32) which is mounted on the linear drive and which is capable of linearly reciprocating in longitudinal directions of the linear drive,

wherein the load port unit (40) is mounted on the outside of the front wall of the system body (30), and the linear drive is mounted inside of the front wall of the system.

Akimoto et al varies from claim 1 by not specifying that the linear drive for transfer robot (32) is a linear drive motor. However Akimoto et al recites that convey robot (50) can comprise a ball screw mechanism, a belt mechanism, a linear motor, an air convey mechanism, and the likes, see column 3, lines 14-16, as to teach that these are art recognized equivalent linear drives. Therefore it would have been obvious to one of ordinary skill in the art to use a linear motor as the linear drive for the convey robot (32) of Akimoto et al, as the reference itself teaches that a linear motor is one of the four basic types of linear


drives for convey robots. Akimoto et al has a lower exhaust fan (67), as recited in claim 2, and an upper clean air supply (82), as recited in claim 3.

9. Claims 4 and 6, as best understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable over WO '333 in view of Ito. WO '333 shows the basic claimed wafer transfer system, but varies from the claims by not having an emergency braking system for the linear motor. Ito shows a similar drive system with a brake which automatically activates upon actuation (considered also as an emergency switch) or upon power loss, see column 6, lines 25- 59. It would have been obvious to one of ordinary skill in the art to provide the linear motor of WO '333 with a braking system, for stopping the linear motion of the convey robot upon power loss and when otherwise desired, for accurate positioning of the convey robot, as taught by Ito.

10. Claims 4 and 6, as best understood, are rejected under 35 U.S.C. § 103(a) as being unpatentable over Akimoto et al, as applied above to claim 1, and further in view of Ito. Akimoto et al shows the basic claimed wafer transfer system, but varies from the claims by not having an emergency braking system for the linear motor. Ito shows a similar drive system with a brake which automatically activates upon actuation (considered also as an emergency switch) or upon power loss, see column 6, lines 25- 59. It would have been obvious to one of ordinary skill in the art to provide the linear motor of Akimoto et al with a braking system, for stopping the linear motion of the convey robot upon power loss and when otherwise desired, for accurate positioning of the convey robot, as taught by Ito.

11. Iwasawa et al, Kanayama et al, and Berner et al are cited as showing similar transfer systems.

12. An inquiry concerning this action should be directed to Examiner Thomas J. Brahan at telephone number (703) 308-2568 on Mondays through Fridays from 9:30-7:00 EST. The examiner's supervisor, Ms. Eileen Lillis, can be reached at (703) 308-3248. The fax number for Technology Center 3600 is (703) 305-7687.


THOMAS J. BRAHAN
PRIMARY EXAMINER